

NATURAL COLOUR BATIK HANDICRAFT IN SRAGEN, CENTRAL JAVA (A STUDY TO IMPROVE HANDICRAFTER'S WELFARE)

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Abstract

The aim of this research is to increase of the welfare of most people in the research area of the object, ie in Masaran Subdistrict, Sragen, Central Java, by encouraging the batik industry in that area. So far, most people living in Masaran, Sragen, work in the batik industry as labor. This research were conducted in two Small-Scale Medium Businesses (*SMBs*) in that Subdistrict, ie Batik Morinda and Sadewa. Those batik those companies have advantages in the production process. Both of them use natural coloring material (not the chemical stuff). Therefore their products are more natural, environmental-friendly and have high interest in the international market.

The research problems are: a) The source of raw materials are difficult to be Obtained (only available in some areas are far from Sragen roomates). b) Limited production capacity due to limited production tools. c) The ability of available human resources is the minimum. d) Traditional business management. e) Limited and less inovative batik designs.

In overall, the pattern used in the implementation method of this activity includes: discussion, workshop/studio work, factory operating, training and mentoring (groups/ individuals). The steps in the implementation of science and technology are: team discussion with *the SMEs* regarding the development of batik designs roomates have high interest in the market and unavailable in *the SME*, designing machines (feeder) roomates are needed for production, managerial trainings (accounting, marketing, human resources) and techinal trainings in order to increase of the ability/skill of the workers. Besides, the Efforts to develop the usage of natural coloring materials are more encouraged by assisting the *SMEs* in providing access to the source of raw materials and lab testings. Then, those activities are Followed by mentoring so that all activities can be conducted effectively accivities.

Keywords: batik handicraft, natural color, batik designs

A. INTRODUCTION

Batik is one of Indonesian culture is recognized in the eyes of the world, and on October 2, 2009 Batik Indonesia is officially recognized by the UNESCO representative included in the list of Intangible Cultural heritage as humans (Representative List of the Intangible Cultural Heritage of Humanity) in Session -4 Intergovernmental Committee (Fourth Session of the Intergovernmental Committee) on Intangible Cultural Heritage in Abu Dhabi. The ministry declared the entry of Indonesian Batik in the UNESCO *Representative List of Intangible Cultural Heritage of Humanity* is an international recognition of the Indonesian cultural one eye, which is expected to motivate and uplift the dignity of batik craftsmen and support efforts to improve the welfare of the people.

Every region in Indonesia both Java and outside Java has natural and cultural richness that can be expressed as a motif. Natural wealth in the form of flora, fauna and landscapes. Sragen is one batik-producing areas in Central Java, today has expanded its technology and design. Amid the rise of modern batik industries that use a lot of synthetic dyes, Sragen still retain the use of natural dyes derived from nature, plants and animals.

Batik craft in Sragen is a heritage that has lasted over 100 years. At first the craft of batik is done by batik workers men and women who work at the company in Surakarta batik. Furthermore, batik workers began work at home batikan as folk craft which then developed into home industry (*home industry*). Batik industry business development Sragen officially began in 1985,

is one of the leading sectors of the textile industry is expected to contribute to economic growth after industrial Agricultural and Forestry (HPK) and furniture.

Interpersonal patterns of SMEs

Each SME has some differences, which lies in the type of product, type of marketing agencies, and consumer segments. In terms of products, SME-1 dominant batik manufacture of a variety of materials with natural dyes with leaf and floral motifs, while the SME-2 producing batik and batik print with chemical dyes and natural dyes. SME market segment batik-1 for the lower class, middle-and upper-class. One of the SME-1 products are products that are used by the family batik President Susilo Bambang Yudhoyono. SME-2 producing batik for the lower class, middle, and upper.

In general, the pattern of relationships among SMEs working very well, as seen for example between SMEs often borrow from each other various materials and equipment. For example, when the SME-1 deficiency fabric SME-2 will supply and vice versa, or other materials (wax, evening). Similarly, in terms of equipment and design (screen) among SMEs will complement each other, especially the screen, because to make the kind of long motif usually takes between 5-10 screen.

Technical Problems

Based on preliminary surveys, there are some problems facing SMEs today that need solving are: Internal problems include raw material acquisition, financing, design innovation, and financial management, which includes also the financial administration / accounting. Most SMEs have not been taking notes well, and not attempt to differentiate between personal property assets.

a. Business Management

Forms of organization SME everything is shaped individual effort, while most of the workforce is female. In operation SMEs do not split the treasure so that less effort can determine the actual amount of income, although progress can be seen from the business and assets as

well as a means of increasing the number of production processes and the behavior of the large number of marketed. So that SMEs need to get an effective coaching Financial Management in order to accurately determine the extent of the effort was successfully implemented.

b. Wage System

Wage systems in SMEs varies, mostly based on the number of products produced / wholesale.

Barriers: no general and uniform rate among SMEs.

To solve these problems in the first year, the research team provided training Special Sederhara bookkeeping models that can be applied to SMEs SMEs and the SME already Beginner Walk.

Obstacles encountered:

1. Because of his efforts have long felt it less difficult to start from the beginning where do bookkeeping or inventory of their assets in a way.
2. Most do not understand how essential records and financial statements when his business began to grow rapidly.
3. Ebb and flow of their businesses on the one hand and the many individual needs with the condition that there was no property or confuse the separation between business and personal needs feel pretty no problem with such conditions as individual companies.

c. SME capital

Sources and allocation of funds derived from SME businesses and some of the equity capital of the loan. Allocation of funds to meet the needs of SMEs are equipment, supplies, raw materials, auxiliary materials, labor, and promotion costs.

Delayed obtained information about the SME loan opportunities and do not know how to submit a proposal to get the loan. If managers are less well will make SMEs are less

conductive conditions. Overview of SME capital: comparison of own and foreign capital is still relatively balanced. Still need a helping government assistance in product development and financial assistance.

d. **Raw Materials And an aide price range.**

Raw materials whose supply is erratic even have to come from outside the city. Raw materials imported batik natural color of Solo and Yogyakarta.

Barriers:

SMEs need to get Raw Materials Outer City and inefficient.

Problems of SMEs, Solutions and Target Outcomes Land policy issues

On the whole technical or administrative problems identified by the proposing team in every aspect of SME businesses and SMEs Batik Batik Morinda Sahadev greatly affect the perceived smoothness of a business, and needs to be resolved for three (3) years are:

- Raw materials are relatively distant origin.
- K emampuan production is limited because lack of means of production.
- Ability / skill craftsmen minimal human resources.
- M anagement businesses are still traditional.
- Marketing is limited (in terms of network) and the number of competitors.
- Equipment is traditional or very simple.
- Orking m requires businesses through loans with soft interest.

There are problems related to the equipment, which at the moment is still quite traditional, given the limited availability of capital so as to reach equipment such as electric stoves,

computers for pattern, pattern table, penglorot tub, bathtub coloring, clothesline - permanent, and another canting- others still need the help of stakeholders, particularly Government Sragen.

Problems *skill* and ability of the craftsmen still limited, it is necessary to increase skills and knowledge. Overview of the craftsman or mission is to improve the quality of Sragen batik batik so as not to lose the outside Sragen. It is still always haunt the craftsmen, especially with the implementation of the ACFTA free trade batik Sragen readiness to compete with foreign products remains a problem for craftsmen. However, with good intentions and sincere craftsmen strive to move forward and compete with the products from anywhere. Batik products are most favored by consumers today is the Batik style Sragen.

In terms of management, the Company did not have any Batik so it requires coaching abilities. In the case of the majority of consumer product marketing Batik is the consumer or the local market. The other half is a regional consumer, such as Surabaya, Kalimantan and Bali. At the local level to serve the consumer and office employees who will have a lavatory. This marketing technique is necessary given that there will be an increase in network expansion and market reach.

Human Resources owned by Morinda Batik is very potential. Employees and artisans made up of workers who are young who had the opportunity to go forward and easily scouted. Nevertheless, it is still very lacking ability to require guidance from professional parties or an expert in the field.

While the outcome of the main program for the team is proposing outputs berkaitan feeder with improved design tools, and the development of design patterns based on local culture (typical motif Sragen).

Table 1. Issues SMEs Batik Morinda

| Aspects of the business | Problems |
|--------------------------------|--|
| Raw Materials | |
| Production | <ul style="list-style-type: none"> Equipment is still very simple (traditional), so it needs the technology innovation |
| Process | The process is still limited to the making of batik |
| Product | Product diversification is limited, so the design needs improvement |
| Management | <p>Management is still family so not well ordered.</p> <ol style="list-style-type: none"> Human resources management, there has been no regeneration in the manufacture of batik motifs and patterns. Because new mothers handled by Morinda and are elderly. Lack of production management competence / expertise specifically in the production process of making patterns, drawing, batik until finishing & dyeing process Financial Management, the lack of bookkeeping, though modest, in the business so it will thrive well Marketing management, there is no good marketing strategy so that the marketing of relatively constant month to month |
| Equipment management | computer information technology and communication media |
| Marketing | <ul style="list-style-type: none"> The area around and outside Java (Bali, Borneo). Marketing still be simple so that needs to be done to develop the market promotion. P roses in marketing directed at marketing with multimedia |

Table 2.Problems SMEs Batik Sadewa

| Aspects of the business | Problems |
|--------------------------------|--|
| Raw Materials | Remote access raw materials (for Solo) |
| Production | Equipment is still very simple (traditional), so it needs technological innovation: |
| Process | The process is still limited to the making of batik |
| Product | Product diversification is limited, so the design needs improvement |
| Management | <p>Traditional management, management needs to be improved in a professional manner. Management is still family so not well ordered.</p> <ol style="list-style-type: none"> Human resources management, there has been no regeneration in pattern making all activities ranging from the manufacture of batik motif or pattern, production, marketing to finance only held by one person. Lack of production management competence / expertise specifically in the production process of making patterns, drawing, batik until finishing & dyeing process Financial Management, the lack of bookkeeping, though modest, in the business so it will thrive well Marketing management, there is no good marketing strategy so that the marketing of relatively constant month to month |
| Equipment management | <ul style="list-style-type: none"> computer information technology and communication media |
| Marketing | <p>Marketing is still simple that needs to be done to develop the market promotion.</p> <p>P roses in marketing directed at marketing with multimedia</p> |
| HR | Skill is still limited, need to increase the competence (knowledge and skills) |

| Aspects of the business | Problems |
|-------------------------|---|
| Facilities | Facilities are limited, in order to support the necessary increase in productivity There needs to be setup in the production process so as to make production more simple and run smoothly. The main facility is required <ol style="list-style-type: none"> pan for nglorog, sewage treatment plant Spatial planning so that production could flow more smoothly Show room for production. Computer |
| Financial | Limited capital, need assistance in the form of soft loans. No bookkeeping |

C. Methods of Implementation

Broadly speaking, the pattern used in the implementation of activities IbPU include: discussion, work workshop

/studio, plant operations, training and mentoring (group and individual). The steps in the implementation of science and technology are presented in Table 3.

Table 3. Patterns and methods of implementation IbPU

| Implementation science and technology | : | Stages of implementation |
|---|---|---|
| Innovation dye machine (feeder), includes the addition of rotary pipe outside the tube as the color, the addition of two rollers, the addition of the motor | : | <ul style="list-style-type: none"> Team discussions with SMEs about the advantages and disadvantages of existing feeder The team designed a feeder image, then discussed again Revised drawings feeder design Making the feeder in the garage UNS Excess redesigning feeder: fabric perfectly open automatically, as the fabric does not rub against the silent, steady pace, fast, and lightweight, flat colors, fast drying. |
| Development of printed batik design | : | <ul style="list-style-type: none"> Discussions with the team about the SME market interest motif (consumer) and not yet available in SMEs Draft design drawings motif (A4 paper) The discussion draft drawing batik design with SMEs Improvements draft design into design work ready (1:1 on tracing paper) The design work ready diapdruk on screen Screen results apdruk tested and refined |
| | : | <ul style="list-style-type: none"> Team discussions with SMEs on the concept that the market demands motif (consumer) and not yet available in SMEs, with labar cultural destinations (eg wayang beber patterned design for the Indian market, Thailand, the motive for the Japanese cherry blossoms) The draft master batik design drawings (A4 paper) The discussion draft drawing batik design with SMEs Improvements draft design into design work ready (1:1 on tracing paper) |

| Implementation science and technology | : | Stages of implementation |
|---|----------|---|
| | | <ul style="list-style-type: none"> • Design master design compiled with other masters and with other colors, produced many new designs ready for work |
| Innovation dough composition of colors | : | <ul style="list-style-type: none"> • Contok collection of color intensity, and then offered to SMEs, and SME team determines these colors (list colors Table 7 and Table 8) • The team made the dough dikendaki bleak color batik SMEs based on the theory of color batik (naphthol, natural dyes). Adjuvants to induce and reinforce batik natural color is lime, citrus, vinegar, saltpetre, alum, rock sugar, palm sugar, prusi, molasses, lime water, tape (cassava / sticky rice), banana and guava klutuk |
| Implementations staining techniques | : | <ul style="list-style-type: none"> • Staining with the dye techniques with less machine feeder • One machine feeder for one color, so the color matches the color that you want, no contamination with other colors. • Staining with a dab technique, with the brush tool in small areas. |
| Innovations print table rails models dead (static). | : | <ul style="list-style-type: none"> • Team discussions with SMEs on the print table design, size, and material. • Ctak table 2 x 10 m (4 pieces of cloth), or print a table size that is longer will be more effective production process. |
| Plant layout design | : | <ul style="list-style-type: none"> • Team discussions with SMEs about the condition of the existing production flow (over / under) • Teams and SMEs plan to discuss the plant layout, plant layout elected realized. |
| Management Development | : | <ul style="list-style-type: none"> • Team discussions with SMEs about the condition of the existing production management (over / under) • The team conducted an analysis of SME management needs, including the needs of ATK • Teams prepare bookkeeping materials: books dafatr goods inventory, beginning balance book, cash book transactions, the purchase of books, book sales, book inventory, accounts books, book debts, wages bankbuku books, book income, book production costs, book orders, book balance the end of the book balance and the comparison |

Training

For the development of managerial systems and to improve the skills of employees / batik artisans have done a wide variety of training, including:

1. Managerial training, which includes Human Resource Management, Marketing Management, Production Management, and Financial Management is simple, especially on the recording.

2. Training on the development of batik design. In the training steps are performed:

<Tim discussions with SMEs to determine the design concepts are much in demand by the market / consumer, of

course taking into account that for the implementation of natural colors will slightly increase the cost of production.

<Team makes draft design motifs proposed on A4 paper

<Figure draft design motifs are then discussed with the owners of SMEs, then if necessary, make revisions.

<Draft revised design was then made into a design ready to work with 1:1 scale on tracing paper, which later became the master design.

<SMEs then develop this master design by making modifications and improvements that can enrich existing motif.

3. Training on the use of Natural Color Techniques ,
Namely the use of environmentally friendly natural dyes (instead of chemical dye), the material is derived from leaves, fruits, roots, and so on.

Table 4. Material natural color and color batik

| No. | Materials dyes | The resulting color |
|-----|---------------------------------------|---------------------|
| 1. | Indigo leaves (indegofera) | Blue |
| 2. | Higher bark Soga | Red |
| 3. | Soga bark tegeran | Yellow |
| 4. | Soga bark jambal | Red-brown |
| 5. | Java soga bark (cup), tekik | Red |
| 6. | The roots of noni (Morinda cyrifelia) | Red-brown |
| 7. | Intersection buffoonery | White milk |
| 8. | Turmeric | Orange |
| 9. | Tea | Brown + black |
| 10. | Gambir / nut | Red-brown-black |
| 11. | Bark and leaves of mango / mempelam | Brown |
| 12. | Leaves whisker shy daughter | Brown |
| 13. | Banana flower | Red-black |
| 14. | Peanut leaf | Brown |

D. Conclusions and Suggestions

Conclusion

1. Implementation Program

a.Preparation

The preparation stage includes the step of preliminary visits to SMEs with requirements analysis and preparation of training materials, facilities required, as well as a competent instructor, has been done on time according to the proposed schedule is July 2013 and the achievement of the objectives meet the criteria as planned.

b. Implementation.

Broadly speaking, the pattern used in the implementation of this IbPU include: discussion, work workshop / studio, plant operations, training and mentoring (group and individual). The steps performed are:

1. Discussion Team with SMEs about the condition of the machine dyes

(feeder) existing as well as potential improvement / development or the need for the addition of a new engine.

2. Development of design / motif new, more attractive and marketable. Technical 3.Inovasi staining (with natural dyes) are more attractive to consumers (especially overseas consumers), and the printing table innovation dead rail models (static) to develop the production process.

4.Development and Management Training, which includes Human Resource Management, Marketing Management, Production Management and Financial Management (Recording). Then all these activities followed by assistance in the implementation process.

2. Institutional Benefits

Efforts application of science and technology (science and technology) developed have contributed to the increase in the participation of the University of March in order to improve the quality of life of rural communities, in particular the presence of SMEs around the partners (Kec. Masaran Sragen district) in the fields of education, economics, social and culture.

3. Social Benefits

Implementation of activities IbPU held in the batik industry is giving a

contribution to the development and improvement of human resources for the citizens in District Masaran Sragen, so as to improve their motivation and skills to become self-employed or independent business managers become more professional workers.

The application of technology and innovation in the design of batik dyeing techniques with natural dyes has provided added value by increasing managerial skills and abilities better.

Suggestion

To further enhance the effectiveness of the implementation / implementation of science and technology program for Products Featured in future, it is advisable to:

1. Using the approach of the partners with a better method, as well as sufficient socialization that more SME partners

have no motivation to evolve and improve its performance.

2. Consistently various fields of design innovation and implementation of training methods should be developed according to the needs of participants and the grasp of the trainees.

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